Your Product Quick to Tox

Quick to Clinic



From cell bank to GMP in 8 months

With over 40 years of experience in recombinant protein expression, we've developed a robust microbial platform dedicated to the rapid and reliable production of VHH antibodies in E. coli or P. pastoris (K. phaffii), with scalable output and full GMP compliance.







End-to-End **Assistance**



GMP Quality



Designed for Tox & Ph I

VHH platform for optimized production

We've built a **robust VHH production platform**, developed through **extensive testing** on a diverse set of VHH models, including:

- Mono-, bi-, and tri-specific formats
- Isoelectric points between pI 5 and 9
- Diverse **hydrophobicity** properties

This toolbox allows us to rapidly assess your VHH product against our optimized fermentation and purification platform, enabling the fast delivery of high-quality material suitable for Tox studies and Phase I human clinical trials.

Two expression platforms

- P. pastoris (K. phaffii)
- E. coli

Fermentation

- High-cell density fed-batch
- Control of critical fermentation parameters
- Animal-free media

Purification

- Ion-Exchange

The VHH toolbox

At the heart of our

microbial platform

It integrates various **microbial**

strategies, purification, and QC methods to rapidly fine-tune each production process.

host systems, fermentation

- Hydrophobic Interaction Chromatography (HIC)
- Mix mode
- Affinity

Quality Control & Release

- GMP QC package
- Additional custom QC development available
- QP release

Support

- Project Management
- Dedicated team
- VHH Experts
- Tailored made solution

Accelerate time to clinic

Fast track to purified VHH

Starting from your research cell bank, we **rapidly identify** the most suitable **fermentation** and **purification** conditions for your VHH molecule. This ensures the fast delivery of **purified material**, optimized for **Tox studies** and **Phase I** clinical trials and GMP readiness.

8 months

Reduced time to commercialization

With scalable microbial processes and GMP-compliant production capabilities, our VHH platform and CDMO expertise support your project through preclinical, clinical, and commercial stages, accelerating the path to market for your VHH-based drug substance. We also offer the possibility to validate your process for future commercial phases.

Timeline for GMP-Grade VHH Manufacturing

From Feasibility to Clinical Supply

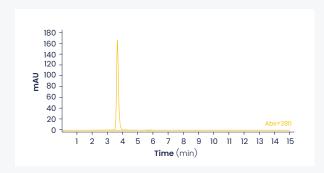


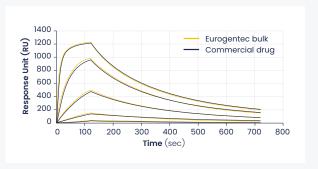
GMP QC package

Our GMP QC package includes a full panel of analytical methods for GMP-grade VHH release. Optional tests can be added based on your molecule's specific needs.

Attributes	Testing	Attributes	Testing
Identity	SDS-PAGE	Appearance	Colorimetry
	Western blotting		Turbidimetry
	SE-HPLC	Physico-chemical	рН
Purity	Molecular size distribution by SE-HPLC	Optional QCs	
Protein content	UV / μBCA / Lowry	Identity	ESI-Q-TOF
Impurity	Host Cell Protein by ELISA		RP-HPLC
	Host Cell DNA by qPCR	Purity	RP-HPLC
Safety	Endotoxin	Physico-chemical	Visible particles
	Bioburden		Osmolarity
Residual	Methanol / IPTG	Potency	Antigen binding assay by SPR
	Protein A (ELISA)		ELISA

High quality





High Purity level

SE-HPLC analysis of a **trivalent bispecific VHH** shows a purity level of **98.7%**.

Binding affinity testing

SPR analysis (Biacore system) confirms that Eurogentec's bulk material displays **binding affinity equivalent to the commercial reference**, with Kd values of 19.7 nM and 20.9 nM, respectively.

